Partial Splenectomy for Epithelial (Epidermoid) Splenic Cysts: Report of Two Cases

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ABSTRACT

Primary splenic cyst is a relatively rare disease, and the majority of cases are classified as epithelial (epidermoid) cysts. Two cases with epithelial splenic cysts are presented. Both cases had some similar symptomatology, like fullness in the left upper abdomen and a palpable mass. Preoperative radiological diagnosis was pancreatic pseudocysts. Exploratory laparotomy and partial splenectomy was done. The post operative period was uneventful in both the cases.

Because of post-splenectomy sepsis, the management has shifted to splenic preservation when feasible. Partial splenectomy is an acceptable procedure for the treatment of splenic cysts which are suitably located, because it cures the disease preserving the splenic tissue. Complete splenectomy is reserved for cases in which cyst excision cannot be done otherwise.

Keywords: *epithelial splenic cysts; partial splenectomy; splenic preservation.*

INTRODUCTION

Splenic cysts are unusual in everyday surgical practice. They can be parasitic (hydatid), caused by the parasite Echinococcus granulosus, or nonparasitic.[1,2] Non-parasitic cysts are classified as primary (true, epithelial), lined by an epithelial cover (epidermoid, dermoid, and mesothelial) or endothelial cover (hemangioma, lymphangioma), and secondary (pseudocysts, non-epithelial), which are usually of post-traumatic origin.[3,4] Primary splenic cysts comprise 30-40% of the total.[5]

Because of post-splenectomy sepsis, the management has shifted to splenic preservation when feasible. Partial splenectomy is an acceptable procedure for the treatment of splenic cysts which are suitably located, because it cures the disease preserving the splenic tissue. Complete splenectomy is reserved for cases in which cyst excision cannot be done otherwise. We present two cases of splenic cyst managed with partial splenectomy and cystectomy in our institute.

CASE REPORT

Two cases of splenic cyst were admitted to our hospital and underwent successful partial splenectomy and cyst excision and had uneventful postoperative recovery. First case was a 65 years old male who presented with complaints of abdominal discomfort and fullness in left upper abdomen for two weeks. He also gave history of fever, cough, difficulty in breathing in supine position, early satiety and anorexia. Another case was a 40 year old female with complaints of pain and fullness in left upper abdomen for three months. There was

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no history of haematuria, decrease in size of swelling after micturation, vomiting, constipation, diarrhea or abdominal trauma in both the cases.

In both the cases per-abdominal examination revealed similar findings: a huge lump present in the left hypochondrium extending to left lumbar, umbilical and epigastric region, nontender, smooth surface, which showed movement with respiration. Upper border of the lump could not be felt and was dull on percussion over lump.

Haematological and biochemical investigations were normal in both the cases. Ultrasound of the abdomen in both the cases showed a large cystic lesion with internal echoes in the region of the tail of the pancreas suggesting pseudopancreatic cyst/splenic cyst.

CT scan of the abdomen of both the patients showed a large well defined non-enhancing thin walled (~2mm) cystic lesion anterior to the body and tail of the pancreas. The lesion was compressing and displacing the pancreas posteriorly, spleen laterally, stomach anteriorly and adjacent bowel loops towards right side. No evidence of papillary projection/septations was seen suggesting features of pancreatic pseudocyst (Figure 1).

Figure 1. CT Scan of the abdomen showing cyst.

Both the cases were prepared for exploratory laparotomy with preoperative diagnosis of pseudo-pancreatic cyst. Exploratory laparotomy, partial splenectomy (with cystectomy) was done in male patient on 8/01/066. Peroperative finding was 20x15 cm^2 splenic cyst arising from the mid and lower pole of the spleen containing about 1.5 liters of greenish fluid; omentum adhered to the cyst (Figure 2). Diagnostic laparoscopy was done in female patient on 10/01/066. Peroperative finding was 15x12 cm^2 splenic cyst arising from the upper and mid pole of the spleen containing greenish fluid; cyst adhered to the stomach and left lobe of liver (Figure 3). The procedure was then converted to laparotomy and partial splenectomy with excision of cyst was done (Figure 4).

Histopathological report in both cases was suggestive of epithelial cyst of spleen. Aspirated cystic fluid showed no evidence of malignant cells. Both cases did not have any problem postoperatively. They were discharged on fourth and third post operative day respectively.

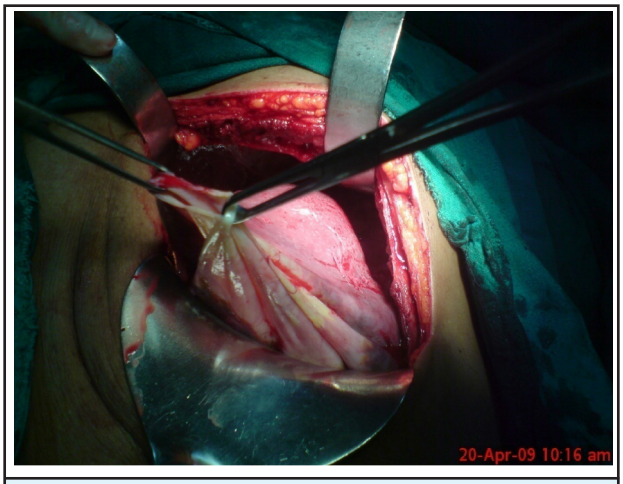

Figure 2. Peroperative photo after aspiration of splenic cyst in male patient.

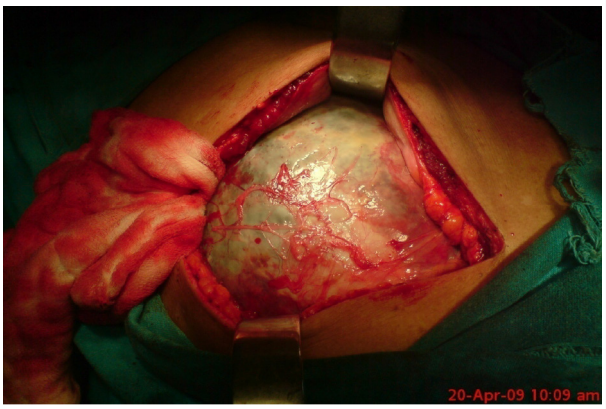

Figure 3. Peroperative photo of splenic cyst in female patient.

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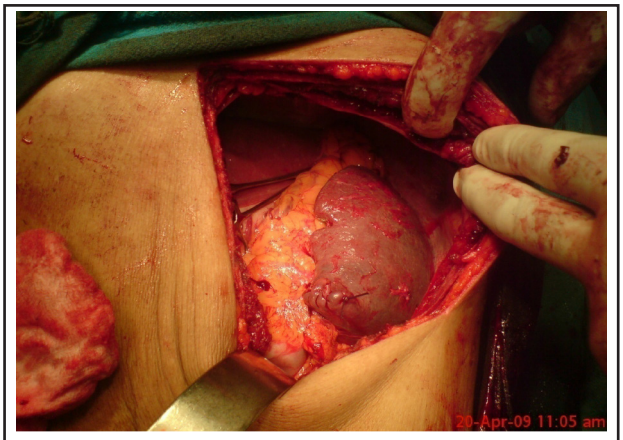

Figure 3. Peroperative photo of splenic cyst in female patient.

DISCUSSION

In 1929, Andral first described the dermoid splenic cyst at autopsy. They can be classified as primary (true) cysts (30%-40%) or secondary (false) pseudocysts.[6] The etiology of primary cysts can be parasitic or nonparasitic (congenital). Worldwide, Echinococcus infestation accounts for over 50% of all splenic cysts.[7] In western countries, secondary splenic cysts compose the majority of splenic cysts (75%) and are usually a late complication of previous abdominal trauma.[8]

Most patients with splenic cysts experience minor, non-specific symptoms related to the mass effect of the cyst.[9] Rupture, haemorrhage, and infection may be life-threatening, have been reported.[10] Splenic cysts may become very large and are considered giant when they grow larger than 15 cm.[11]

In 1987, Pean performed the first recorded splenectomy for the cyst.[12] The primary goal of treatment is to resolve symptoms and prevent complications. The secondary goal is to preserve splenic parenchyma. Non-operative measures, such as observation, have been recommended for asymptomatic cysts smaller than 5 cm. Spontaneous resolutions of traumatic pseudocysts can occur. Surgical treatment usually is recommended for symptomatic patients or for those with cysts larger than 5 cm.[11]

Percutaneous aspiration of the cyst and instillation of alcohol or tetracycline in cyst promote fibrosis and prevent reaccumulation. This should not to be considered a definitive treatment as often leads to recurrence.[10]

Total splenectomy used to be the treatment of choice for parasitic and non-parasitic splenic cysts. But due to increasing awareness of the immunologic function of the spleen, organ-preserving techniques were developed to avoid the rare but life-threatening risk of overwhelming postsplenectomy sepsis (OPSS).[13] Total splenectomy is indicated in case of a very large cyst; cyst located in the splenic hilum; covered completely by the splenic parenchyma (intrasplenic cyst) and multiple cysts (polycystic cases).[1]

Spleen salvage procedures comprises of cyst excision with partial splenectomy and cyst marsupialization with partial cyst wall excision. The risk of recurrence is minimal with marsupialization.

Partial splenectomy preserves more than 25% of splenic parenchyma (minimal splenic tissue to preserve immunologic protection) without the risk of recurrence. It can be performed safely with laparoscopic approach and is recommended if the cyst is located in the poles of the spleen, or cyst cavity is deep, due to the higher risk of recurrence.[4,5,14]

Splenic cysts larger than 5 cm or symptomatic should be treated surgically with the goal to preserve as much of splenic parenchyma as possible. Very large cyst and intrasplenic cysts or those located in the splenic hilum need total splenectomy. Partial splenectomy with cystectomy could be an acceptable procedure in the majority of other cases. Laparoscopic approach seems to be a safe procedure, having all the benefits of minimally invasive surgery.

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